



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/083,448	02/25/2002	Charles E. Perkins	089229.00123	6051
32294 7590 08/02/2007 SQUIRE, SANDERS & DEMPSEY L.L.P. 14TH FLOOR 8000 TOWERS CRESCENT TYSONS CORNER, VA 22182			EXAMINER NALVEN, ANDREW L	
			ART UNIT 2134	PAPER NUMBER
			MAIL DATE 08/02/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/083,448

Applicant(s)

PERKINS ET AL.

Examiner

Andrew L. Nalven

Art Unit

2134

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-2 and 4-21 are pending.

Response to Arguments

2. Applicant's remaining arguments filed 26 June 2007 have been fully considered but are not persuasive.
3. Applicant has argued that the cited references fail to teach the authenticating the mobile node to the network and the authenticating the network to the mobile node is performed in a single round trip while the mobile node is roaming. Examiner respectfully disagrees. Fehnel teaches authenticating the mobile node to a network (Fehnel, column 7 lines 50-62). Further, Marcovici teaches authenticating the network to the mobile node in a single round trip while the mobile node is roaming (Marcovici, page 5, section 4.1.1, steps a-e, Figure 4.1.1-1 "if SSD is not shared"). Marcovici's single round trip includes the mobile station sending an authentication value to the network (Marcovici, page 5, Steps a-b) and the network sending back a single response (Marcovici, page 5, step e). Marcovici's single round trip authentication procedure can operate while roaming as is evidenced by the VLR having to access the SSD from an HLR (Marcovici, Figure 4.1.1-1). Thus, the combination of Fehnel, Chakrabarti, and Marcovici teach the authenticating the mobile node to the network and the authenticating the network to the mobile node is performed in a single round trip while

Art Unit: 2134

the mobile node is roaming because Fehnel discloses authenticating the mobile node to a network and Marcovici discloses authenticating the network to the mobile node and authentication using a single round trip.

4. Applicant further argues that there is no motivation to combine Fehnel, Chakrabarti, and Marcovici. Examiner respectfully disagrees. Combining Fehnel with Chakrabarti and Marcovici would provide the advantages of enhancing security providing support for new generations of cellular technology (Marcovici, page 2 section 1) and provide for more efficient support of the transmission of bursts of data thus improving cost effectiveness of the cellular network (Chakrabarti, column 2 lines 15-35).

These are positive benefits that would have motivated one of skill in the art to combine. Improving data traffic and security are advantages that would have been attractive to one of ordinary skill in the art.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2134

5. Claims 1-5, 10-13 and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fehnel US Patent No. 5,887,251 in view of Chakrabarti et al US Patent No. 6,678,281 and Marcovici "Global Authentication."

6. With regards to claims 1, 10-11, and 19-21, Fehnel teaches sending a random number to a mobile node wherein the random number is generated local to the mobile node, wherein the random number is generated by a base station (Fehnel, column 7 lines 40-42), generating a mobile node signature using the mobile node, wherein the mobile node signature is generated using the random number (Fehnel, column 7 lines 43-62), and authenticating the mobile node to a network (Fehnel, column 7 lines 50-62). Fehnel fails to teach the network being a GPRS network and authenticating the network to the mobile station. However, Chakrabarti teaches a GPRS network involved in authentication (Chakrabarti, column 6 lines 50-62, Abstract). Further, Marcovici teaches authenticating the network to the mobile station (Marcovici, page 5, section 4.1.1, particularly step e) wherein the authenticating the authenticating the network to the mobile node is performed in a single round trip while the mobile node is roaming (Marcovici, page 5, section 4.1.1, steps a-e, Figure 4.1.1-1 "if SSD is not shared"). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the method of Fehnel with the teaching of Chakrabarti and Marcovici because it would offer the advantage of enhancing security providing support for new generations of cellular technology (Marcovici, page 2 section 1) and provide for more efficient support of the transmission of bursts of data thus improving cost effectiveness of the cellular network (Chakrabarti, column 2 lines 15-35).

7. With regards to claims 2, 12, Fehnel as modified teaches sending the mobile node signature to an authentication server and verifying by the authentication server the mobile node signature (Macrovinci, page 5 section 4.1.1).

8. With regards to claim 4, Fehnel as modified teaches generating an authentication signature by the authentication server and sending the authentication signature to the mobile node (Macrovinci, page 5 section 4.1.1).

9. With regards to claims 5, 13, Fehnel as modified teaches the mobile station verifying the authentication signature (Macrovinci, page 5 section 4.1.1, step e).

10. Claims 6-9 and 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fehnel US Patent No. 5,887,25, Chakrabarti et al US Patent No. 6,678,281, and Marcovici "Global Authentication," as applied to claim 5 above, and in further view of Grob et al US Patent No. 6,894,994.

11. With regards to claims 6, 14, Fehnel as modified fails to teach the authentication server being a home authentication server. However, Grob teaches teach the authentication server being a home authentication server (Grob, column 12 lines 30-44). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to utilize Grob's method of using a home authentication server because it offers the advantage of providing an industry standard protocol for authentication using the RADIUS protocol (Grob, column 2 lines 54-60).

12. With regards to claims 7, 15, Fehnel as modified teaches sending the mobile node signature to a local authentication server wherein the local authentication server is

Art Unit: 2134

located in a foreign domain and forwards the signature to the home authentication server (Grob, column 12 lines 30-44).

13. With regards to claims 8-9, 17-18, Fehnel as modified teaches determining when the mobile node signature and authentication signature are not verified (Fehnel, column 7 lines 54-62).

14. With regards to claim 16, Fehnel as modified teaches the AAAH configured to send the authentication signature to the AAAF and the AAAF is configured to send the authentication signature to the mobile node (Grob, column 12 lines 30-44, Fehnel, column 7 lines 54-62).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 2134

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew L. Nalven whose telephone number is 571 272 3839. The examiner can normally be reached on Monday - Thursday 8-6, Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kambiz Zand can be reached on 571 272 3811. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Andrew Nalven



KAMBIZ ZAND
SUPERVISORY PATENT EXAMINER